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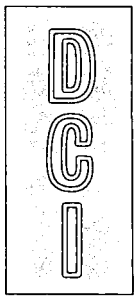

DIRECTOR
OF
CENTRAL
INTELLIGENCE

Intelligence Information Handling Committee

REPORT OF THE INTELLIGENCE INFORMATION HANDLING COMMITTEE ON THE COMMUNITY INFORMATION RETRIEVAL SYSTEM

OBJECTIVES FOR IMPROVEMENT OF INFORMATION HANDLING IN THE INTELLIGENCE COMMUNITY

Secret

September 1982

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Report of The Community Information Retrieval System Working Group

September 1982

Working Group Participants

[redacted]

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MEMBERS OF THE DCI's INTELLIGENCE INFORMATION HANDLING COMMITTEE

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Agency	
Air Force	
Army	
DARPA	
CIA	
DIA	
DOE	
DUSD(C^3I)	
FBI	
Navy	
NSA	
State	
Treasury	

FOREWORD

Pursuant to Section 102 of the National Security Act of 1947 and Executive Order 12333, the Director of Central Intelligence established the Information Handling Committee (IHC). One of the functions of the Committee is to promote and coordinate the development of Intelligence Community information handling capabilities which will provide analysts relevant multi-source information on a timely basis. The purpose of this report is to document the results of a Community planning effort performed for the IHC by a working group composed of representatives from several major agencies within the Community. The task of the working group was to develop a plan for constructing a Community Information Retrieval System (CIRS). The report provides a summary of the work performed by the working group, includes an overview of the requirements for CIRS, and presents a goal architecture and phased implementation plan for the development of CIRS. The full IHC unanimously agreed to adopt the plan developed by the CIRS working group at the IHC's September 1982 meeting and also recommended that the plan be presented to the DCI for approval. (U)

The Report of the Intelligence Information Handling Committee on the Community Information Retrieval System is the third publication in a series which bears the overall title of Objectives for Improvement of Information Handling in the Intelligence Community. (U)

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I. EXECUTIVE SUMMARY

PROBLEM

The Director of Central Intelligence recently stressed the need for more competitive intelligence analysis throughout the Intelligence Community. He said, in effect, that the quality of our intelligence product must be improved. One might reasonably ask how we might achieve the desired qualitative improvements in intelligence reporting. Improved collection systems are a necessary part of any answer, but members of the Intelligence Information Handling Committee (IHC) are convinced that better systems for the processing and screening of collected data and for the delivery of pertinent data to the analyst are equally important, as are better tools to assist in the analysis of that data once it has been received. Indeed, over the past ten years there have been frequent reports that warned of a constantly widening gap between our ability to collect raw intelligence data and the capability of production analysts and data base managers to disseminate, organize, store, retrieve, and evaluate this expanding tide of material. Limitations on our capability in this regard mean that our intelligence analysis and reporting runs a greater risk of being incomplete, misleading, or incorrect. 25X1

The IHC has long been charged with the responsibility to develop an Intelligence Community information handling system that would facilitate the exchange of intelligence among the several agencies and improve information support to intelligence production analysts. Even as the IHC has pursued this goal, however, the individual intelligence agencies have continued to develop new information systems or make improvements in existing information systems with minimum concern for the advantages to be gained by seeking IC commonality in hardware, software, and operational philosophy; and this divergent trend continues today despite a growing recognition of the similarity of information needs among Community analysts and the advantages that could accrue if information sharing were facilitated. 25X1

To address this problem the IHC sponsored a working group composed of representatives from Intelligence Community components supported by two independent contractor teams to develop a long-term, Community-wide plan for improving the exchange of information in the Intelligence Community. The fundamental task of the working group was to devise plans for a secure, cost-effective system to facilitate sharing of intelligence information among the several intelligence agencies, thereby giving production analysts improved access to the information they need to do their job, without interfering with the capability of the individual agencies to satisfy their own unique information requirements. 25X1

PURPOSE

The CIRS Working Group was tasked to:

- refine and validate requirements for a Community system that will facilitate the sharing of intelligence information among IC member agencies;

- propose an overall system architecture best suited to meet the Community's needs and;
- prepare a planning document identifying those steps necessary to build a system which will satisfy these requirements. 25X1

METHODOLOGY

The starting point for the CIRS study was to identify, verify, and evaluate information requirements of intelligence analysts throughout the Community and to specify the functional requirements of a Community information sharing system designed to be responsive thereto. The second major step was to investigate the capabilities of selected agency systems now being developed to satisfy intelligence analyst requirements, with particular attention to the capabilities being programmed for CIA SAFE and DIA SAFE. A third area of investigation involved an appraisal of the current and future status of computer and network security, which is fundamental to the implementation of any system involving the large scale interagency exchange of classified and highly sensitive information in the Community. 25X1

Based on the results of the foregoing investigations, the CIRS Working Group examined various architectural approaches that might be used in developing a Community system. Many alternatives were considered, and a recommended design was finally approved. The concluding part of the study was devoted to developing the proposed milestones that should be accomplished by IHC and the individual intelligence agencies in the evolution of a total Community-wide system by a planned completion date of 1990. 25X1

PROPOSED SYSTEM DESIGN

The recommended architectural design for CIRS will result in a system of systems. CIRS *will not* be a totally new system in the normal sense of the term; rather it will be built on existing and developing Community information systems and telecommunications capabilities. We should also note that many of the steps that are incorporated into the overall CIRS plan are part of currently planned and programmed enhancements of existing Community systems. Indeed, much of CIRS is embodied in the original concept of the Community On-Line Intelligence System (COINS) and the Department of Defense Intelligence Information System (DODIIS). CIRS is thus the logical culmination of more than a decade of Community effort on information sharing. 25X1

While CIRS will provide the means to eliminate unnecessary and wasteful duplication in existing and developing components systems, it is not conceived as a substitute for these systems. Rather, the emphasis is on supplementing and enhancing the individual agency information systems and providing for their interconnection, thereby enabling individual intelligence components to concentrate their efforts on improving their support to agency-specific missions and responsibilities. Also, CIRS will enable the provision of a full range of support to those Intelligence Community components that lack the resources to provide such support internally. 25X1

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CIRS is intended to provide additional capabilities to Community analysts without incurring high costs or unacceptable technical risks. To achieve this goal, CIRS will make extensive use of the technology already being used or developed in various parts of the IC. This approach will allow the Community to take immediate advantage of its large investment in existing and developing automated information systems even while it moves toward the expanded level of bibliographic/document service defined in the CIRS requirements. Also, analysis performed during the course of the CIRS study supports the conclusion that this approach will provide the greatest benefits at the least cost to the NFIP. Cost estimates

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TECHNICAL RISKS

Technical risks involved in the proposed CIRS configuration are minimal. The component systems are either currently operational or in an advanced stage of development. The enhancements needed to satisfy CIRS requirements can be made gradually, without major disruptions of service to local system users. Also, the use of off-the-shelf hardware and software will help keep technical risks low. Actually, the major barrier to a successful implementation of CIRS is of a nontechnical nature and lies in the increased level of cooperative commitment required from the several intelligence agencies. This barrier can be largely negated by IHC's adoption of a realistic implementation plan and by Community leadership's strong and continuing support for the CIRS concept.

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DEVELOPMENT AND IMPLEMENTATION

Each participating agency will be responsible for designing, developing, and operating its part of CIRS. Agencies and components will continue to have unique requirements for additional processing of many of the documents to be included in CIRS, and they can satisfy these requirements by maintaining agency-unique computing capabilities.

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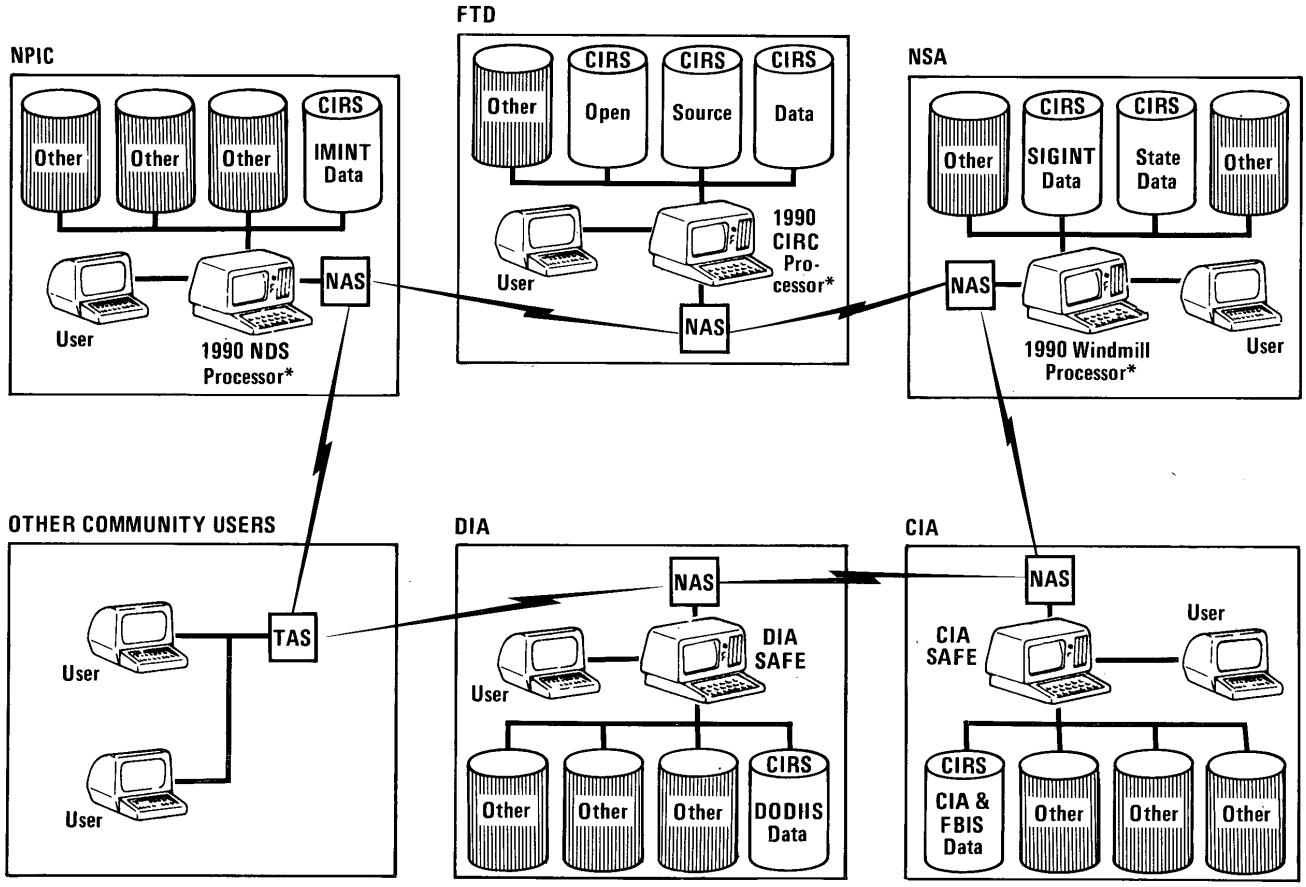
FIGURE 1
GOAL ARCHITECTURE OF COMMUNITY INFORMATION
RETRIEVAL SYSTEM FOR 1990 FOC IMPLEMENTATION



*Assumes 1990 Processors will provide compatible community capabilities

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The proposed CIRS milestones and the statement of development tasks are relatively flexible in order that each participating agency can control internal implementation within the framework of Community guidelines and mutual commitments. The success of the system will not depend upon every milestone being met precisely in sequence and as scheduled; and, as a practical consideration, the Community will realize a significant improvement over today's capabilities to support intelligence analysis even as each stage of CIRS development is completed. Adding to the safety and attractiveness of the proposed approach is the fact that resources can be incrementally committed to the CIRS effort. 25X1

Despite the flexibility that is built into the proposed CIRS development effort, we must emphasize the absolute necessity of wholehearted Community commitment to the CIRS concept. Without such commitment we will achieve nothing. Also, for the project to get a proper start, it is vital that initial tasks be undertaken promptly and finished on or near schedule. 25X1

RECOMMENDATIONS

The working group's principal recommendations are as follows:

- The IHC, after appropriate review, should request that the DCI authorize the development of CIRS and make provisions to include the project within the structure of the National Foreign Intelligence Program and Budget.
- CIRS should be understood to be a Community effort to improve exchange of information between member agencies.
- The distributed system design and modular approach described in this report should be the basis for the CIRS architecture.
- The incremental implementation plan for CIRS development described in this report should be adopted as a general guideline for future development. Specific details may change as the system evolves.
- Work should be authorized and funded as quickly as possible in order that development of the initial NSA node can begin.
- The IHC should establish an appropriate management and funding mechanism and develop a detailed implementation plan and milestones to replace the more general guidelines set forth in this report. The implementation plan should be reviewed and updated on an annual basis and revised as necessary to reflect Community experience as each phase of the growing system is completed. 25X1

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